

**ABSTRACT OF THE DISCLOSURE**

Various embodiments of the invention present techniques for forming structures via a combined electrochemical fabrication process and a thermal spraying process or powder deposition processes. In a first set of embodiments, selective deposition occurs via masking processes (e.g. a contact masking process or adhered mask process) and thermal spraying or powder deposition is used in blanket deposition processes to fill in voids left by selective deposition processes. In a second set of embodiments, after selective deposition of a first material, a second material is blanket deposited to fill in the voids, the two depositions are planarized to a common level and then a portion of the first or second materials is removed (e.g. by etching) and a third material is sprayed into the voids left by the etching operation. In both embodiments the resulting depositions are planarized to a desired layer thickness in preparation for adding additional layers.